

87290-33

11/25/2013

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, D.C. 20460



OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

Willowood, LLC  
c/o Cheryl Wagner  
Wagner Regulatory Associates, Inc.  
P.O. Box 640  
Hockessin, DE 19707

NOV 25 2013

Subject: Amended label adding pollinator protection language  
Product Name: Willowood Imidacloprid 2SC  
EPA Reg. No. 87290-33  
EPA Decision No. 484436  
Submission dated September 30, 2013

Dear Ms. Wagner:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act is acceptable. A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one (1) copy of the final printed labeling before you release the product for shipment with the new labeling. See 40 CFR 156.10(a)(6).

Under 40 CFR 152.130(d), EPA may establish dates by which all product distributed or sold by the registrant must bear revised labeling. The following paragraphs set forth the schedule for ensuring that that your product bears revised labeling within a reasonable time period.

- Any product released for shipment after 2/28/14 must bear the new label.

If these conditions are not complied with, EPA will take appropriate action against this registration. If you have any questions please contact Dr. Debra Rate at 703-306-0309 or [rate.debra@epa.gov](mailto:rate.debra@epa.gov).

Regards,

A handwritten signature in black ink that reads "Venus Eagle".

Venus Eagle, Product Manager (01)  
Insecticide-Rodenticide Branch  
Registration Division (7505P)

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### Willowood Imidacloprid 2SC

For uses in pest management, suppression of insects that may vector diseases and maintenance of plant health for soil application.

**ACTIVE INGREDIENT:**

Imidacloprid: 1-[(6-Chloro-3-pyridinyl)methyl]N-nitro-2-imidazolidinimine.....21.4%

**OTHER INGREDIENTS:**.....78.6%

**Total:**.....100.0%

Contains 2 pounds of imidacloprid per gallon.

Shake well before using.

**KEEP OUT OF REACH OF CHILDREN**

### CAUTION

#### FIRST AID

|                      |  |
|----------------------|--|
| <b>IF SWALLOWED:</b> | <ul style="list-style-type: none"> <li>• Call a poison control center or doctor immediately for treatment advice.</li> <li>• Have person sip a glass of water if able to swallow.</li> <li>• Do not induce vomiting unless told to do so by a poison control center or doctor.</li> <li>• Do not give anything by mouth to an unconscious person.</li> </ul> |
|----------------------|--|

|                    |  |
|--------------------|--|
| <b>IF IN EYES:</b> | <ul style="list-style-type: none"> <li>• Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>• Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul> |
|--------------------|--|

|                                |  |
|--------------------------------|--|
| <b>IF ON SKIN OR CLOTHING:</b> | <ul style="list-style-type: none"> <li>• Take off contaminated clothing.</li> <li>• Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>• Call a poison control center or doctor for treatment advice.</li> </ul> |
|--------------------------------|--|

|                    |  |
|--------------------|--|
| <b>IF INHALED:</b> | <ul style="list-style-type: none"> <li>• Move person to fresh air.</li> <li>• If person is not breathing call 911 or ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible.</li> <li>• Call a poison control center or doctor for further treatment advice.</li> </ul> |
|--------------------|--|

**NOTE TO PHYSICIAN:** No specific antidote is available. Treat the patient symptomatically.

Have a product container or label with you when calling a poison control center or doctor, or going for treatment.

**Emergency Numbers:** For 24-hour medical emergency assistance (human or animal) call **1-800-222-1222**. For chemical emergency assistance (spill, leak, fire, or accident) call ChemTrec at **1-800-424-9300**.

See inside booklet for additional **PRECAUTIONARY STATEMENTS**.

EPA Reg. No. 87290-33

EPA Est. No. ACCEPTED

Net Contents: \_\_\_\_\_

**NOV 25 2013**

**Manufactured for:**  
Willowood USA LLC  
1600 NW Garden Valley Blvd  
Roseburg, OR 97471

**Under the Federal Insecticide, Fungicide,  
and Rodenticide Act, as amended, for the  
pesticide registered under:**

EPA. Reg. No. 87290-33

**PRECAUTIONARY STATEMENTS**  
**HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**Caution:** Harmful if swallowed. Harmful if absorbed through skin. Harmful if inhaled. Causes moderate eye irritation. Avoid contact with eyes, skin, or clothing. Avoid breathing dust. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Wear long sleeved shirt, long pants, shoes, socks, and chemical resistant gloves (such as or made out of any waterproof material, selection category A).

**Applicators and other handlers must wear:**

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton.
- Shoes plus socks

Follow manufacturer's instructions for cleaning/maintaining personal protective equipment, PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.

**ENGINEERING CONTROLS STATEMENTS**

When handlers use closed systems or enclosed cabs in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

**USER SAFETY RECOMMENDATIONS**

**User should:**

- Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

**ENVIRONMENTAL HAZARDS**

Do not apply directly to water, areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

This product is highly toxic to bees exposed to direct treatment or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds if bees are foraging the treatment area. This product is toxic to wildlife and highly toxic to aquatic invertebrates.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in groundwater contamination.

TAKE THE FOLLOWING PRECAUTIONS WHEN MIXING AND APPLYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES, RESERVOIRS, RIVERS, PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

## SPRAY DRIFT MANAGEMENT

The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. **Avoiding spray drift is the responsibility of the applicator.**

### Importance of Droplet Size

An important factor influencing drift is droplet size. Small droplets (<150-200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, make applications deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection.

### Wind Speed Restrictions

Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Risk of exposure to sensitive aquatic areas can be reduced by avoiding applications when wind direction is toward the aquatic area.

### Restrictions During Temperature Inversions:

Do not make ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

### Mixing and Loading Requirements

To avoid potential contamination of groundwater, the use of a properly designed and maintained containment pad for mixing and loading of any pesticide into application equipment is recommended. If containment pad is not used, maintain a minimum distance of 25 feet between mixing and loading area and potential surface to groundwater conduits such as field sumps, uncased well heads, sinkholes or field drains.

### No-Spray Zone Requirements for Soil Applications

Do not apply within 25 feet of lakes, reservoirs, rivers, permanent streams, marshes or natural ponds, estuaries and commercial fish farm ponds.

### Runoff Management

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When using Willowood Imidacloprid 2SC on erodible soils, employ Best Management Practices for minimizing runoff. Consult your local Natural Resources Conservation Service for recommendations in your use area.

**Endangered Species Notice**

Under the Endangered Species Act, it is a Federal Offense to use any pesticide in a manner that results in the death of a member of an endangered species. Consult your local county bulletin, County Extension Agent, or Pesticide State Lead Agency for information concerning endangered species in your area.

**Resistance Management**

Some insects are known to develop resistance to insecticides after repeated use. As with any insecticide, the use of the product should conform to resistance management strategies established for the use area.

Willowood Imidacloprid 2SC contains a Group 4A insecticide. Insect biotypes with acquired or inherent resistance to Group 4A insecticides may eventually dominate the insect population if Group 4A insecticides are used repeatedly as the predominant method of control for targeted species.

The active ingredient in Willowood Imidacloprid 2SC is a member of the neonicotinoid chemical class. Insect pests resistant to other chemical classes have not shown cross-resistance to Willowood Imidacloprid 2SC. In order to maintain susceptibility to this class of chemistry in insect species with high resistance development potential, it is recommended that for each crop season: 1) only a single soil application of Willowood Imidacloprid 2SC be made; 2) foliar applications of products from this same class not be made following a long residual soil application of Willowood Imidacloprid 2SC, or other neonicotinoid products.

*Other Group 4A, neonicotinoid products labeled for foliar treatments include: Actara, Assail, Calypso, Centric, Intruder and Leverage.*

*Other 4A Group, neonicotinoid products used as soil/seed treatments include: Cruiser and Platinum.*

Contact your Cooperative extension specialist, certified crop advisor and/or product manufacturer for additional insect resistance management recommendations. Also, for more information on Insect Resistance Management (IRM), visit the Insecticide Resistance Action Committee (IRAC) on the web at <http://irac-online.org/>.

**DIRECTIONS FOR USE**

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

**Exception:** If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls
- Chemical-resistant gloves made of any waterproof material such as, barrier laminate, butyl rubber, nitrile rubber, neoprene rubber, natural rubber, polyethylene, polyvinyl chloride (PVC) or viton
- Shoes plus socks

**APPLICATION INSTRUCTIONS**

Direct applications of Willowood Imidacloprid 2SC into the seed or root-zone of crop. Failure to place Willowood Imidacloprid 2SC into root-zone may result in loss of control or delay in onset of activity. Field applications of Willowood 2SC are to be applied only with ground (in-furrow, band, or drench methods) and chemigation into the root zone. Do not apply with aerial application equipment. Broadcast, foliar applications are only for seedling flats or trays, or where product is intended to be washed from foliage to soil prior to drying on foliage within the planthouse/greenhouse.

Optimum activity of Willowood Imidacloprid 2SC results from applications to the root-zone of plants to be protected. The earlier Willowood Imidacloprid 2SC is available to a developing plant, the earlier the protection begins. Willowood Imidacloprid 2SC is continuously taken into the roots over a long period of time and the systemic nature of Willowood Imidacloprid 2SC allows movement from roots through the xylem tissue to all vegetative parts of the plant. This results in extended residual activity of Willowood Imidacloprid 2SC, the control of insects and the prevention and/or reduction of virus transmission or symptom expression, and plant health benefits. The rate of Willowood Imidacloprid 2SC applied affects the length of the plant protection period. Use the higher rate within the specified rate range when infestations occur later in crop development or where pest pressure is continuous. Willowood Imidacloprid 2SC will generally not control insects infesting flowers, blooms or fruit. Additional crop protection may be required for insects feeding in, or on these plant parts and for insects not listed in the crop-specific, pests controlled sections of this label. Additional specific Willowood Imidacloprid 2SC application instructions are provided in the crop-specific sections of this label.

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Suppression or less than complete control of certain diseases and insect pests including reduced feeding may also result from Willowood Imidacloprid 2SC applications. Complete control of these pests/diseases may require supplemental control measures.

Willowood Imidacloprid 2SC use on crops grown for production of true seed intended for private or commercial planting is not permitted but may be allowed under State specific 24(c) labeling. As with any insecticide, care should be taken to minimize exposure of Willowood Imidacloprid 2SC to honey bees and other beneficial pollinators. Additional information on Willowood Imidacloprid 2SC uses for these crops and other questions may be obtained from the Cooperative Extension Service, PCAs, consultants or local Willowood USA representatives.

Make applications only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil medias such as perlite, vermiculite, rock wool or other soil-less media, or plants growing hydroponically.

Premix Willowood Imidacloprid 2SC with water or other appropriate diluent prior to application. Keep Willowood Imidacloprid 2SC and water suspension agitated to avoid settling.

Do not apply more than 0.50 lbs. active ingredient per acre, per crop season, regardless of formulation or method of application, unless specified within a crop-specific Application Instruction section for a given crop.

### MIXING INSTRUCTIONS

To prepare the application mixture, add a portion of the required amount of water to the tank and, with agitation, add labeled rate of Willowood Imidacloprid 2SC. Complete filling tank with balance of water needed. Maintain sufficient agitation during both mixing and application. Willowood Imidacloprid 2SC may also be used with other pesticides. **Refer to Compatibility Note below.** When tank mixtures of Willowood Imidacloprid 2SC and other pesticides are involved, prepare the tank mixture as instructed above and follow mixing order below.

#### Mixing Order

When pesticide mixtures are needed, add wettable powders or wettable granules first, Willowood Imidacloprid 2SC and other suspension concentrate (flowable) products second, and emulsifiable concentrates last. Ensure good agitation as each component is added. Do not add an additional component until the previous is thoroughly mixed. If a fertilizer solution is added, a fertilizer/pesticide compatibility agent may be needed. Maintain constant agitation during both mixing and application to ensure uniformity of spray mixture.

#### Compatibility Note

Test compatibility of the intended mixture before adding Willowood Imidacloprid 2SC to the spray or mix tank. Add proportionate amounts of each ingredient in the appropriate order to a clear pint or quart sized jar, cap, shake for 5 minutes, and let set for 5 minutes. Do not use poor mixing or formation of precipitates that do not readily re-disperse. For further information, contact your local Willowood USA representative.

### CHEMIGATION – DIRECTIONS FOR USE

**Types of Irrigation Systems:** Chemigation applications of Willowood Imidacloprid 2SC may only be made to crops through chemigation systems as specified in crop-specific Application Instruction

section and only through low-pressure systems unless specified for a given crop. Do not apply Willowood Imidacloprid 2SC through any other type of irrigation system.

**Uniform Water Distribution and System Calibration:** The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, contact Cooperative Extension Service specialists, equipment manufacturers or other experts.

**Chemigation Monitoring:** A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

**Drift:** Do not apply when wind speed favors drift beyond the area intended for treatment.

**Required System Safety Devices:**

- The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.
- The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.
- The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.
- The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

**Using Water from Public Water Systems:** Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, back flow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and to top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe. The pesticide injection pipeline must contain a functional automatic quick-closing check valve to prevent the flow of fluid back toward the injection. The pesticide injection pipeline must contain a functional normally closed solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump

motor stops or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

### ROTATIONAL CROPS\*

Treated areas may be replanted with any crop specified on an imidacloprid label, or any crop for which a tolerance exists for the active ingredient, as soon as practical following the last application. For crops not listed on an imidacloprid label, or for crops for which no tolerances for the active ingredient have been established, a 12-month plant-back interval is required.

#### Immediate Plant-back:

All crops listed on this label plus the following crops not on this label: barley, canola, corn (field, sweet and pop), rapeseed, sorghum, soybean, sugar beet, and wheat.

#### 30-Day Plant-back:

Cereals (including buckwheat, millet, oats, rice, rye and triticale), and safflower

#### 10-Month Plant-back:

Onion and bulb vegetables.

#### 12-Month Plant-back:

All other crops.

\*Cover crops for soil building or erosion control may be planted any time, but do not graze or harvest for food or feed.

### FIELD CROPS

#### Applications - Willowood Imidacloprid 2SC

#### COTTON

| Pests Controlled                                | Rate<br>(fluid ounces/1,000 row-feet) | Rate<br>(fluid ounces/Acre)                |
|---|---------------------------------------|--|
| Cotton aphid, Plant bugs,<br>Thrips, Whiteflies | 1.3                                   | 17.0 to 21.1<br>(Depending on row spacing) |

#### Restrictions:

- Maximum Willowood Imidacloprid 2SC allowed per year: 21.1 fluid ounces/Acre (0.33 lb. AI/Acre)
- Regardless of formulation or method of application, apply no more than 0.5 lbs. active ingredient per acre per year, including seed treatment, soil and foliar uses.
- Do not graze treated fields after any application of Willowood Imidacloprid 2SC.
- Please see "**Resistance Management**" section of this label.

#### Applications:

Apply specified dosage of Willowood Imidacloprid 2SC in one of the following methods:

1. In-furrow spray during planting directed on or below seed;
2. In a narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting;
3. Chemigation into root-zone through low-pressure drip or trickle irrigation.

**PEANUT<sup>1</sup>**

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b> |  |
|---|-------------------------------------|--|
| Aphids<br>Leafhoppers<br>Whiteflies   | 16.0-24.0                           |  |
| <b>Pests Suppressed</b>   |                                     |  |
| Thrips  | 16.0-24.0                           |  |
| <b>Restriction:</b>   |                                     |  |
| <ul style="list-style-type: none"> <li>• Pre-harvest interval (PHI): 14 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)</li> </ul>   |                                     |  |
| <b>Applications:</b>  |                                     |  |
| Apply specified dosage in one of the following methods:   |                                     |  |
| <ol style="list-style-type: none"> <li>1. In-furrow spray during planting directed on or below seed</li> <li>2. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> </ol>  |                                     |  |
| <b>Important Note:</b> Increases in Tomato Spotted Wilt Virus (TSWV) incidence have been observed with applications of Willowood Imidacloprid 2SC on multiple varieties of peanut. This may also be the case with other tospoviruses, or other viruses transmitted by various thrips species or perhaps, other pests. Prior to applying Willowood Imidacloprid 2SC to peanuts, Willowood USA recommends consultation with the State, Cooperative Extension Service, or a Willowood USA representative, for recommendations. Growers are advised to weigh insect control benefits against potential increase in viral disease levels. In areas where TSWV or other tospovirus are endemic, growers are encouraged to use virus resistant varieties and consult the University of Georgia, Tomato spotted wilt virus index, before applying Willowood Imidacloprid 2SC. |                                     |  |
| <sup>1</sup> Use not permitted in California unless otherwise directed by State specific 24(c) labeling.  |                                     |  |

**POTATO**

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/ 1,000 row-feet)</b> | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|--|-------------------------------------|
| Aphids, Colorado potato beetle,<br>Flea beetles, Potato psyllid,<br>Leafhoppers   | 0.9 to 1.3                                     | 13.0 to 20.0                        |
| <b>Pests/Diseases Suppressed</b>  |  |                                     |
| Symptoms of:<br>Potato leaf roll virus (PLRV),<br>Potato yellows,<br>Net necrosis<br>Wireworms (with in-furrow<br>spray at planting)                | 0.9 to 1.3                                     | 13.0 to 20.0                        |
| <b>Restrictions:</b>  |  |                                     |
| <ul style="list-style-type: none"> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 20.0 fluid ounces/Acre (0.31 lb. AI/Acre).</li> </ul> |  |                                     |
| <b>Applications:</b>  |  |                                     |

Apply specified dosage in one of the following methods:

1. In-furrow spray during planting directed on the seed pieces or seed potatoes;
2. Subsurface side-dress on both sides of the row covered with 3 or more inches of soil;
3. Narrow band spray at ground cracking directly over the row during hilling covered with 3 or more inches of soil;
4. Narrow band directly below the eventual seed row in a bedding operation 7 or fewer days before planting. For effective pest control or suppression, Willowood Imidacloprid 2SC applications must be placed below soil-surface and in contact with seed piece or within root-zone. For potatoes grown on highly permeable soils with shallow water table, at-plant applications of Willowood Imidacloprid 2SC may be made in a 2- to 4-inch band (width of planter shoe opening) and completely covered.

### POTATO (Seed Piece Treatment)

| Pests Controlled   | Rate<br>(fluid ounces/100 lbs. seed) | Rate<br>(fluid ounces/Acre*) |
|--|--------------------------------------|------------------------------|
| Aphids, Colorado potato beetle,<br>Flea beetles, Leafhoppers,<br>Potato Psyllids, Wireworms<br>(seed-piece protection) | 0.4-0.8                              | 8.0-16.0                     |
| <b>Diseases Suppressed</b>   |                                      |                              |
| Symptoms of:<br>Potato leaf roll virus (PLRV),<br>Potato yellows,<br>Net necrosis                                      | 0.8                                  | 16.0                         |

#### Restrictions:

- Maximum Willowood Imidacloprid 2SC allowed per year: 20.0 fluid ounces/Acre (0.31 lb. AI/Acre)
- Do not use treated seed-pieces for food, feed, or fodder.
- Do not apply any subsequent application of Willowood Imidacloprid 2SC (in-furrow) following a Willowood Imidacloprid 2SC seed-piece treatment.

#### Application:

Apply specified dosage as a diluted spray onto seed-pieces using a shielded spray system. Dilute with 3 parts water, or less, to 1 part Willowood Imidacloprid 2SC. Agitate or stir spray solution as needed. Fungicidal or inert absorbent dusts may be applied after a Willowood Imidacloprid 2SC application. Apply only in areas with adequate ventilation or in areas that are equipped to remove spray mist or dust. Plant seed-pieces as soon as possible after treating. Avoid prolonged exposure of Willowood Imidacloprid 2SC treated seed pieces to sunlight and in accordance with the recommendation of your local Extension specialist.

\*Based on a seeding rate of 2,000 lbs./acre.

**TOBACCO**

| <b>Pests Controlled</b>   | <b>Rate<br/>fluid ounces/1,000 plants<br/>(as seedling tray drench)</b> | <b>Rate<br/>fluid ounces/1,000 plants<br/>(in-furrow or transplant-water)</b> |
|---|---|---|
| Aphids<br>Flea beetles  | 1.0   | 1.4   |
| Mole Crickets, Whiteflies,<br>Wireworms                         | 1.4-2.8   | 1.8-2.8   |
| <b>Pests/Diseases Suppressed</b>                                |   |   |
| Cutworms<br>Symptoms of:<br>Tomato spotted wilt virus<br>(TSWV) | 1.4-2.8   | 1.8-2.8   |

**Restrictions:**

- Pre-Harvest Interval (PHI): 14 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/acre)

**Applications:**

Apply specified dosage in one of the following methods:

1. Uniform, broadcast foliar spray to seedlings in trays (tray drench) not more than 7 days prior to transplanting followed immediately by overhead irrigation to wash Willowood Imidacloprid 2SC from foliage into potting media. Failure to wash Willowood Imidacloprid 2SC from foliage may result in a reduction in pest control. Carefully handle transplants during setting to avoid dislodging treated potting media from roots.
2. In-furrow spray or transplant-water drench during setting.
3. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Important Note:** Proper tray drench applications of Willowood Imidacloprid 2SC have been shown to be the most efficacious method of application. However, the specified rate of Willowood Imidacloprid 2SC may be applied as combination of the tray drench in the planthouse and/or transplant-water drench in field. Adverse growing conditions may cause a delay in uptake of Willowood Imidacloprid 2SC into the plant and a delay in control.

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**VEGETABLE AND SMALL FRUIT CROPS**  
**Applications- Willowood Imidacloprid 2SC**

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**CUCURBIT VEGETABLES<sup>1</sup>**

**Crops of Crop Group 9 including:** Chayote (fruit), Chinese waxgourd, (Chinese preserving melon), Citron melon, Cuban pumpkin, Cucumber, Gherkin, Gourd (edible, includes hyotan, cucuzza, hechima, Chinese okra), *Momordica spp.* (includes balsam apple, balsam pear, bitter melon, Chinese cucumber), Muskmelon (hybrids and/or cultivars of *Cucumis melo* including true cantaloupe, cantaloupe, casaba, Crenshaw melon, golden pershaw melon, honeydew melon, honey balls, mango melon, Persian melon, pineapple melon, Santa Claus melon, snake melon and Winter melon), Pumpkin, Squash (includes summer squash types such as: butternut squash, calabaza, crookneck squash, Hubbard squash, scallop squash, straightneck squash, vegetable

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marrow and zucchini, and winter squash types such as acorn squash and spaghetti squash),  
Watermelon (includes hybrids and/or varieties of *Citrullus lanatus*)

**Field Applications: See details below for additional planthouse applications**

| <b>Pests Controlled</b>  | <b>Rate<br/>(fluid ounces/Acre)</b> |
|--|-------------------------------------|
| Aphids, Cucumber beetles, Leafhoppers, Thrips (Foliage feeding thrips only) and Whiteflies                 | 16.0-24.0                           |
| <b>Pests/Diseases Suppressed</b>   |                                     |
| Bacterial wilt (as vectored by various cucumber beetles)<br>Leaf silvering resulting from whitefly feeding | 16.0 - 24.0                         |

**Restrictions:**

- Preharvest Interval (PHI): 21 days
- Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. Willowood Imidacloprid 2SC must be incorporated into root-zone.

**Planthouse Applications**

| <b>Pests Controlled</b> | <b>Rate<br/>(fluid ounces/1,000 plants)</b> |
|-------------------------|---|
| Aphids and Whiteflies   | 0.1   |

**Restrictions:**

- Maximum amount Willowood Imidacloprid 2SC applied in the planthouse: 0.1 fluid ounces (0.00156 lb. AI)/1,000 plants
- Maximum number Willowood Imidacloprid 2SC applications in planthouse: 1

**Applications:**

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash Willowood Imidacloprid 2SC from foliage into potting media without loss of gravitational liquid from the bottom of the tray. Failure to wash Willowood Imidacloprid 2SC from foliage may result in reduced pest control.
2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field/soil application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Carefully handle transplants during setting to avoid dislodging treated potting media from roots.

### Planthouse Applications

**Important Note:** Not all varieties of cucurbit vegetables have been tested for tolerance to Willowood Imidacloprid 2SC applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

<sup>2</sup>Use not permitted in CA unless otherwise directed by State specific 24(c) labeling.

## GREENHOUSE VEGETABLES<sup>1</sup>

(mature plants in production greenhouses)

Cucumber, Tomato Only

| Pests Controlled      | Rate<br>(fluid ounces/1,000 plants) |
|-----------------------|-------------------------------------|
| Aphids and Whiteflies | 1.4                                 |

### Restrictions:

- Pre-Harvest Interval (PHI): 0 days
- Maximum number Willowood Imidacloprid 2SC applications per crop season: 1

### Applications:

Apply specified dosage in a minimum of 16 gallons of water for tomatoes and 21 gallons of water for cucumbers using soil drenches, micro-irrigation, drip irrigation, or hand-held or motorized calibrated irrigation equipment. Make applications only to plants grown in field-type soils, potting media, or mixtures thereof. Do not apply to plants grown in non-soil medias such as perlite, vermiculite, rock wool or other soil-less media, or plants growing hydroponically. Do not apply to immature plants since phytotoxicity may occur.

Make applications when infestation pressure surpasses threshold and beneficials are not able to maintain pest populations below damage thresholds. Repellency of bumble bee pollinators and negative effects on some beneficial (*Onus sp.*) can occur when Willowood Imidacloprid 2SC is applied.

Many varieties of vegetables have been tested for tolerance to Willowood Imidacloprid 2SC and show good safety. However, certain varieties may show more sensitivity to Willowood Imidacloprid 2SC. Therefore, treatment of a few plants is recommended before treating the whole greenhouse.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

**FRUITING VEGETABLES<sup>1</sup>**

**Crops of Crop Group 8 plus Okra including:** Eggplant, Ground Cherry, Okra, Pepper (Including Bell, Chili, Cooking, Pimento and Sweet), Tomato, Pepinos, Tomatillo

**Field Applications. See details below for additional planthouse recommendations.**

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b>                            |
|---|--|
| Aphids, Colorado potato beetle, Flea beetles, Leafhoppers, Thrips (Foliar-feeding thrips only) and Whiteflies | Okra and Pepper: 16.0 to 32.0<br><br>Other crops: 16.0 to 24.0 |
| <b>Diseases Suppressed</b>  |  |
| Symptoms of:<br>Tomato mottle virus,<br>Tomato spotted wilt virus,<br>Tomato yellow leaf curl virus           | Okra and Pepper: 16.0 to 32.0<br><br>Other crops: 16.0 to 24.0 |

**Restrictions:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum Willowood Imidacloprid 2SC allowed on pepper and okra crops per crop season: 32.0 fluid ounces/Acre (0.50 lbs. AI/acre)
- Maximum Willowood Imidacloprid 2SC allowed on other fruiting vegetable crops per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting
5. Post-seeding drench, transplant-water drench, or hill drench.
6. Subsurface side-dress on both sides of each row. Willowood Imidacloprid 2SC must be incorporated into root-zone.

**Planthouse Applications<sup>2</sup>**

| <b>Pests Controlled</b> | <b>Rate<br/>(fluid ounces/1,000 plants)</b> |
|-------------------------|---|
| Aphids and Whiteflies   | 0.1   |

**Restrictions**

- Maximum amount Willowood Imidacloprid 2SC applied in the planthouse: 0.1 fluid ounces (0.00156 lbs. AI)/1,000 Plants
- Maximum number Willowood Imidacloprid 2SC applications in planthouse: 1

**Applications**

Apply specified dosage to seedlings in trays in the planthouse, targeting soil media (tray drench), not more than 7 days prior to transplanting, in one of the following manners:

1. Uniform, broadcast high-volume foliar spray, followed immediately by sufficient overhead irrigation to wash Willowood Imidacloprid 2SC from foliage into potting media without loss of

gravitational liquid from the bottom of the tray. Failure to wash Willowood Imidacloprid 2SC from foliage may result in reduced pest control.

2. Injection into overhead irrigation system, using adequate volume to thoroughly saturate soil media without loss of gravitational solution from the bottom of the tray.

The application made in the planthouse will only provide short-term protection and is not intended as a substitution for a field application. An additional field/soil application must be made within 2 weeks following transplanting to provide continuous protection. Applications of higher rates or increased number of applications in planthouse may result in significant plant injury. Carefully handle transplants during setting to avoid dislodging treated potting media from roots.

**Important Note:** Not all varieties of fruiting vegetables have been tested for tolerance to Willowood Imidacloprid 2SC applied to seedling flats. It is therefore recommended to treat a small number of plants and confirm tolerance for 7 days prior to treating entire planthouse.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

<sup>2</sup>Use not permitted in CA unless otherwise directed by State specific 24(c) labeling.

### Globe Artichoke<sup>1</sup>

| Pests Controlled    | Rate<br>(fluid ounces/Acre) |
|---------------------|-----------------------------|
| Aphids, Leafhoppers | 16.0-32.0                   |

#### Restrictions

- Pre-Harvest Interval (PHI): 7 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.5 lb. AI/Acre)

#### Applications

Apply specified dosage in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment
2. In-furrow spray directed on or below seed

<sup>1</sup>Use not permitted in CA unless otherwise directed by State specific 24(c) labeling.

**Herbs<sup>1</sup>**

**Crops of Crop Subgroup 19A including:** Angelica, Balm (lemon balm), Basil (fresh and dried), Borage, Bumet, Camomile, Catnip, Chervil (dried), Chinese chive, Chive, Clary, Coriander (cilantro or Chinese parsley leaves), Costmary, Culantro (leaf), Curry (leaf), Dillweed, Horehound, Hyssop, Lavender, Lemongrass, Lovage (leaf), Marigold, Marjoram, Nasturtium, Parsley (dried), Pennyroyal, Rosemary, Rue, Sage, Savory (summer and winter), Sweet bay (bay leaf), Tansy, Tarragon, Thyme, Wintergreen, Woodruff, Wormwood

| <b>Pests Controlled</b>                       | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|-------------------------------------|
| Aphids, Flea beetles, Leafhoppers, Whiteflies | 16.0-24.0                           |
| <b>Pests Suppressed</b>                       |                                     |
| Thrips (foliage feeding thrips only)          | 16.0-24.0                           |

**Restrictions:**

- Pre-Harvest Interval (PHI): 14 days
- Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lb. AI/Acre)

**Applications:**

Apply specified dosage in one of the following methods:

1. In-furrow spray during planting directed on or below seed
2. In-furrow spray or transplant-water drench during setting or transplanting
3. Shanked-into or below eventual seed-line
4. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment

**Notes:** Not all crops and/or varieties listed above have been tested for phytotoxic effects. Without specific knowledge about a particular crop and variety, Willowood strongly recommends that only small areas or numbers of plants of each be treated and evaluated prior to commercial use.

<sup>1</sup>Use not permitted in CA unless otherwise directed by State specific 24(c) labeling.

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**BRASSICA (COLE) LEAFY VEGETABLES<sup>1</sup>**

**Crops of Crop Group 5 including:** Broccoli, Broccoli raab (*rapini*), Brussels sprouts, Cabbage, Cauliflower, Cavalo broccoli, Chinese (*gai ion*) broccoli, Chinese (*bok choy*) cabbage, Chinese (*napa*) cabbage, Chinese mustard (*gai choy*) cabbage, Collards, Kale, Kohlrabi, Mizuna, Mustard Greens, Mustard spinach, Rape greens

| Pests Controlled   | Rate<br>(fluid ounces/Acre)<br>(on 36 inch rows) |
|--|--|
| Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies  | 10.0-24.0  |
| <b>Restrictions:</b> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)</li> </ul> |  |

**BRASSICA (COLE) LEAFY VEGETABLES<sup>1</sup>****Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. Willowood Imidacloprid 2SC must be incorporated into root-zone.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

**LEAFY GREENS VEGETABLES<sup>1</sup>**

**Crops of Crop Subgroup 4A plus Watercress including:** Amaranth (leafy amaranth, Chinese spinach, tampala), Arugula (Roquette), Chervil, Chrysanthemum (edible leaved and garland), Corn salad, Cress (garden), Cress (upland, yellow rocket, winter cress), Dandelion, Dock (sorrel), Endive (escarole), Lettuce (head and leaf), Orach, Parsley, Purslane (garden and winter), Raddicchio (red chicory), Spinach (including New Zealand and vine (Malabar spinach, Indian spinach), Watercress (commercial production only, applications must not be made to native cress growing in streams or other bodies of water), Watercress (upland)

| Pests Controlled   | Rate<br>(fluid ounces/Acre)<br>(on 36 inch rows) |
|--|--|
| Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies  | 10.0-24.0  |
| <b>Restrictions:</b> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)</li> </ul> |  |

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. Willowood Imidacloprid 2SC must be incorporated into root-zone.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

**LEAFY PETIOLE VEGETABLES<sup>1</sup>**

**Crops of Crop Subgroup 4B including:** Cardoon, Celery, Celtuce, Chinese celery (fresh leaves and stalk only), Florence fennel (including sweet anise, sweet fennel, Finocchio), Rhubarb, Swiss chard

| Pests Controlled  | Rate<br>(fluid ounces/Acre) |
|---|-----------------------------|
| Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies | 10.0-24.0                   |

**Restrictions:**

- Pre-Harvest Interval (PHI): 45 days
- Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. In-furrow spray directed on or below seed.
3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.
4. Narrow band spray directly below eventual seed row in bedding operation 14 or fewer days before planting.
5. Post-seeding drench, transplant-water drench or hill drench.
6. Subsurface side-dress on both sides of each row. Willowood Imidacloprid 2SC must be incorporated into root-zone.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

**LEGUME VEGETABLES<sup>1</sup> (except soybean, dry)****Crops of Crop Group 6 including: Edible Podded and Succulent Shelled Pea and Bean and Dried Shelled Pea and Bean****Bean** (*Lupinus spp.*, includes grain lupin, sweet lupin, white lupin, and white sweet lupin)**Bean** (*Phaseolus spp.*, includes field bean, kidney bean, lima bean, navy bean, pinto bean, runner bean, snap bean, tepary bean, wax bean)**Bean** (*Vigna spp.*, includes adzuki bean, asparagus bean, blackeyed pea, catjang, Chinese longbean, cowpea, Crowder pea, moth bean, mung bean, rice bean, Southern pea, urd bean, yardlong bean)**Pea** (*Pisum spp.*, includes dwarf pea, edible-pod pea, English pea, field pea, garden pea, green pea, snow pea, sugar snap pea)**Other Beans and Peas** [Broad bean (fava), Chickpea (garbanzo bean), Guar, Jackbean, Lablab bean (Hyacinth bean), Lentil, Pigeon pea, Soybean (immature seed), Sword bean]

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b> |  |
|---|-------------------------------------|--|
| Aphids, Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies   | 16.0-24.0                           |  |
| <b>Diseases Suppressed</b>  |                                     |  |
| Symptoms of:<br>Bean common mosaic virus (BCMV),<br>Bean golden mosaic virus (BGMV),<br>Beet curly top hybrigeminivirus (BCTV)  | 16.0-24.0                           |  |
| <b>Restrictions:</b>  |                                     |  |
| <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)</li> </ul>   |                                     |  |
| <b>Applications:</b>  |                                     |  |
| Apply specified dosage in one of the following methods:   |                                     |  |
| <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> <li>2. In-furrow spray directed on or below seed.</li> <li>3. Narrow (2" or less) surface band spray over seed-line during planting incorporated to a depth of 1 to 1-1/2" with sufficient irrigation within 24 hours of application.</li> <li>4. Narrow band spray directly below eventual seed row in bedding operation 7 or fewer days before planting.</li> <li>5. Post-seeding drench, transplant-water drench or hill drench.</li> </ol> |                                     |  |
| <sup>1</sup> Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.   |                                     |  |

**ROOT VEGETABLES<sup>1</sup>****Crops of Crop Subgroup 1B except Sugarbeet plus Kava including: Beet (garden)<sup>2</sup>, Burdock (edible)<sup>2</sup>, Carrot<sup>2</sup>, Celeriac<sup>2</sup>, Chervil (turnip-rooted)<sup>2</sup>, Chicory<sup>2</sup>, Ginseng, Horseradish, Kava<sup>2,3</sup>, Parsley (turnip-rooted), Parsnip<sup>2</sup>, Radish<sup>2</sup>, Oriental radish (diakon)<sup>2</sup>, Rutabaga<sup>2</sup>, Salsify (oyster plant), Salsify (black)<sup>2</sup>, Salsify (Spanish), Skirret and Turnip<sup>2</sup>**

| <b>Pests Controlled</b> | <b>Rate<br/>(fluid ounces/1,000 row-feet)</b> | <b>Rate<br/>(fluid ounces/Acre)</b> |
|-------------------------|---|-------------------------------------|
| Aphids, Flea Beetles,   | 0.7-1.7                                       | 10.0-24.0                           |

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|   |  |  |
|---|--|--|
| Leafhoppers, Thrips (foliage feeding thrips only), Whiteflies |  |  |
|---|--|--|

**Restrictions:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)
- Maximum Willowood Imidacloprid 2SC applications per crop season: 1

**Application:**

Apply specified dosage in one of the following methods:

1. Chemigation through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. In-furrow spray (rate specified per 1,000 row-feet) or, shanked-in 1 to 2 inches below seed depth during planting;
3. In a narrow (2 inches or less) band directly (1 to 2 inches) below the eventual seed row in a bedding operation 14 or fewer days before planting.

**Important Note:** Rate applied affects the length of control. Use higher rate within the specified rate range where infestations occur later in crop development, or where pest pressure is continuous. Willowood Imidacloprid 2SC rates less than 0.7 fluid ounces/1,000 row-feet will not provide adequate residual pest control. Willowood Imidacloprid 2SC treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

<sup>2</sup> Tops or greens from these crops may be utilized for food or feed.

<sup>3</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling.

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**TUBEROUS AND CORM VEGETABLES<sup>1</sup>**

**Crops of Crop Subgroup 1C including:** Arracacha, Arrowroot, Artichoke (Chinese and Jerusalem), Canna (edible, Queensland arrowroot), Cassava (bitter and sweet)<sup>2</sup>, Chayote (root), Chufa, Dasheen (taro)<sup>2</sup>, Ginger, Leren, Sweet potato, Tanier (cocoyam)<sup>2</sup>, Tumeric, Yam bean (jicama, manioc pea), Yam (true)<sup>2</sup> (For applications on potato see **Field Crops** section.)

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/1,000 row-feet)</b> | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|---|-------------------------------------|
| Aphids, Flea Beetles,<br>Leafhoppers, Thrips (foliage<br>feeding thrips only), Whiteflies | 0.7-1.7                                       | 10.0-24.0                           |

**Restrictions:**

- Pre-Harvest Interval (PHI) from planting application: 3 days (leaves); 125 days (corms)
- Maximum Willowood Imidacloprid 2SC allowed per crop season: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)
- Maximum Willowood Imidacloprid 2SC applications per crop season: 1

**Application**

Apply specified dosage in one of the following methods:

1. In-furrow spray (rate specified per 1,000 row-feet) over planting material (hulis) or shanked-in 1 to 2 inches below hulis depth at planting;
2. Side-dress not more than 0.6 fluid ounces/1,000 row-feet no later than 45 days after-planting. Observe same PHI as above.

**Important Note:** Rate applied affects the length of control. Use higher rate within the specified rate range where infestations occur later in crop development, or where pest pressure is continuous. Willowood Imidacloprid 2SC rates less than 0.7 fluid ounces/1,000 row-feet may not provide adequate residual pest control. Willowood Imidacloprid 2SC treated crops grown on very high organic matter soils (muck) may also require additional pest management control.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

<sup>2</sup>Tops or greens from these crops may be utilized for food or feed.

**STRAWBERRY (annual and perennial crops)<sup>1</sup>****Annual and Perennial Crops**

| <b>Pests Controlled</b> | <b>Rate<br/>(fluid ounces/Acre)</b> |
|-------------------------|-------------------------------------|
| Aphids, Whiteflies      | 24.0-32.0                           |

**Restrictions:**

- Pre-Harvest Interval (PHI): 14 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)
  - Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low pressure drip, trickle, micro-sprinkler or equivalent equipment after plants are established or on perennial crops in early spring prior to bud opening.
2. As a plant material or plant hole treatment just prior to, or during transplant.

3. As a pre-plant band spray over-the-row in a minimum of 20 gallons of water per acre, followed immediately by overhead irrigation to incorporate product into root-zone. Plastic or other mulches that limit movement of Willowood Imidacloprid 2SC into root zone are not recommended.

The rate applied affects the length of control. Use higher rate within the specified rate range where infestations may occur later in crop development or where pest pressure is continuous.

<sup>1</sup>Do not use both soil application methods on the same crop in the same season.

### SUGARBEET<sup>1</sup>

(For use only in CA)

| Pests Controlled  | Rate<br>(fluid ounces/Acre) |
|---|-----------------------------|
| Aphids, Leafhoppers, Whiteflies and Flea beetles                            | 6.0-12.0                    |
| Diseases Suppressed   |                             |
| Symptoms of:<br>Western yellows /<br>Beet curly top hybrigeminivirus (BCTV) | 6.0 - 12.0                  |

#### Restrictions:

- Maximum Willowood Imidacloprid 2SC allowed per year: 12.0 fluid ounces/Acre (0.18 lbs. AI/acre)
- Do not apply immediately prior to bud opening or during bloom or when bees are foraging.

#### Applications:

Apply specified dosage in the following method:

1. Apply specified dosage in sufficient carrier volume to insure uniform application. Apply directly below each seed furrow either during the bedding operation immediately prior to planting or at the time of planting.

The low rate may be applied to aid establishment of stands in whitefly areas, or for early season control of other pests listed.

<sup>1</sup>Not for use on crops grown for seed unless allowed by State specific 24(c) labeling.

### Willowood Imidacloprid 2SC CONVERSION CHART FOR LINEAR APPLICATION

| RATE<br>fluid ounces<br>/Acre | Rate (Fluid ounces/1,000 row feet)<br>Based on <i>average</i> row spacing (in inches): |      |      |      |      |      |      |      |
|-------------------------------|--|------|------|------|------|------|------|------|
|                               | 10   | 15   | 20   | 25   | 30   | 35   | 40   | 45   |
| 10                            | 0.19   | 0.29 | 0.38 | 0.48 | 0.57 | 0.67 | 0.76 | 0.86 |
| 12                            | 0.23   | 0.34 | 0.46 | 0.57 | 0.69 | 0.80 | .92  | 1.03 |
| 14                            | 0.27   | 0.40 | 0.54 | 0.67 | 0.80 | 0.94 | 1.07 | 1.21 |
| 16                            | 0.31   | 0.46 | 0.61 | 0.77 | 0.92 | 1.07 | 1.22 | 1.38 |
| 18                            | 0.34   | 0.52 | 0.69 | 0.86 | 1.03 | 1.21 | 1.38 | 1.55 |
| 20                            | 0.38   | 0.57 | 0.76 | 0.96 | 1.15 | 1.34 | 1.53 | 1.72 |

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|    |      |      |      |      |      |      |      |      |
|----|------|------|------|------|------|------|------|------|
| 22 | 0.42 | 0.63 | 0.84 | 1.05 | 1.26 | 1.47 | 1.68 | 1.89 |
| 24 | 0.46 | 0.69 | 0.92 | 1.15 | 1.38 | 1.61 | 1.84 | 2.07 |
| 26 | 0.50 | 0.75 | 0.99 | 1.24 | 1.49 | 1.74 | 1.99 | 2.24 |
| 28 | 0.54 | 0.80 | 1.07 | 1.34 | 1.61 | 1.87 | 2.14 | 2.41 |
| 30 | 0.57 | 0.86 | 1.15 | 1.43 | 1.72 | 2.01 | 2.29 | 2.58 |
| 32 | 0.61 | 0.92 | 1.22 | 1.52 | 1.84 | 2.14 | 2.45 | 2.75 |

**Important Note:** The Willowood Imidacloprid 2SC rate applied affects the length of control and to a considerable extent, the degree of control or effect. Row-spacing X Willowood Imidacloprid 2SC rate combinations in shaded blocks may not provide adequate residual pest control and are not recommended for long-term, residual control. Use higher rates where infestations may occur later in crop development or where pest pressure is continuous. Willowood USA offers no warranty for use of Willowood Imidacloprid 2SC at rates below 0.7 fluid ounces/1,000 row-feet.

**TREE, BUSH AND VINE CROPS**  
**Applications - Willowood Imidacloprid 2SC**

**Banana and Plantain<sup>1</sup>**

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|-------------------------------------|
| Aphids, Leafhoppers   | 16.0-32.0                           |
| <b>Pests Suppressed</b>   |                                     |
| Scales  | 16.0-32.0                           |
| <b>Restrictions:</b>  |                                     |
| <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 0 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)</li> </ul> |                                     |
| <b>Applications:</b>  |                                     |
| Apply specified dosage in the following method:   |                                     |
| 1. Chemigation into root-zone through low pressure drip, trickle, micro-sprinkler or equivalent equipment.  |                                     |
| <sup>1</sup> Use not permitted in California unless otherwise directed by State specific 24(c) labeling.  |                                     |

**BUSHBERRY**

**Crops of Crop Subgroup 13B including:** Blueberry, Currant, Elderberry, Gooseberry, Huckleberry, Juneberry, Ligonberry, Salal

| <b>Pests Controlled</b>  | <b>Rate<br/>(fluid ounces/Acre)</b> |
|--|-------------------------------------|
| Japanese beetle (adults, feeding on foliage), White grub complex (grubs of Asiatic garden beetle, European and Masked chafer, Japanese beetle and Oriental beetle)   | 16.0 - 32.0                         |
| <b>Restrictions:</b>   |                                     |
| <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)</li> <li>• Do not apply pre-bloom or during bloom or when bees are foraging.</li> </ul> |                                     |
| <b>Applications:</b>   |                                     |

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. 18-inch band on each side of the row followed by irrigation immediately after application.

For optimal grub control, apply Willowood Imidacloprid 2SC to control 1st or 2nd instar larvae. Make application post-bloom up to 7 days prior to harvest, or post-harvest until October 1st. Make applications from June 1 to July 15 for optimum control of Japanese beetle larvae.

Application to grass covered rows, row middles, drive lanes, headlands, and other grassy areas in and around the berry field will control resident grub populations. Applications directed to the root-zone will help protect berry plant roots from grub feeding.

Apply Willowood Imidacloprid 2SC to moist soil. If necessary, apply one hour of irrigation water immediately before application of Willowood Imidacloprid 2SC. To ensure maximum efficacy of soil surface sprays, 1/2 to 1 inch of irrigation water or rainfall should be applied or received within 24 hours of application of Willowood Imidacloprid 2SC to facilitate movement into the soil and into the root-zone.

## CANEBERRY

**Crops of Crop Subgroup 13A including: Blackberry** (*Rubus eubatus*, including bingleberry, black satin berry, boysenberry, Cherokee blackberry, Chesterberry, Cheyenne blackberry, coryberry, darrowberry, dewberry, Dirksen thornless berry, Himalayaberry, hullberry, Lavacaberry, Loganberry, lowberry, Lucretiaberry, mammoth blackberry, marionberry, nectarberry, olallieberry, Oregon evergreen berry, phenomenalberry, rangeberry, ravenberry, rossberry, Shawnee blackberry, youngberry, and varieties and/or hybrids of these)

**Raspberry** (black and red, *Rubus occidentalis*, *Rubus strigosus*, *Rubus idaeus*)

| Pests Controlled                     | Rate<br>(fluid ounces/Acre) |
|--------------------------------------|-----------------------------|
| Aphids, Leafhoppers, Whiteflies      | 16.0-32.0                   |
| Rednecked cane borer                 | 24.0-32.0                   |
| Pest Suppressed                      |                             |
| Thrips (foliage feeding thrips only) | 16.0-32.0                   |

### Restrictions:

- Pre-Harvest Interval (PHI): 7 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

### Applications:

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. Basal, soil drench in a minimum of 500 gallons solution per acre.

**CITRUS (containerized) – Soil Application**

**Crops of Crop Group 10 including:** calamondin, citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, and other cultivars and/or hybrids of these.

| <b>Pests Controlled</b>  | <b>Rate<br/>(mL/ft<sup>3</sup> container media)</b> |
|--|---|
| Aphids, Asian citrus psyllid, Blackfly, Citrus leafminer, Leafhoppers/Sharpshooters, Mealybugs, Scales, Whiteflies | 0.75  |
| Citrus root weevil (larval complex)  | 1.25 - 2.50   |
| <b>Pest Suppressed</b>   |   |
| Citrus thrips (foliage feeding thrips only)  | 2.50  |

**Application Instructions:**

**For commercial nursery production in standard “citra pot” of 0.1 ft.<sup>3</sup> volume:**

Apply specified dosage of Willowood Imidacloprid 2SC in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Basal, soil drench in a minimum of 30 mls. total solution per “citra pot”.
  - Use sufficient carrier volume to ensure thorough uniform distribution throughout the media without loss of gravitational water from the container.
  - For optimal results, treatment should be made at planting prior to insect infestation.
  - Retreat if necessary but do not apply more than 3.0 mls./plant per season.
  - For control of larvae of the citrus root weevil complex, apply prior to neonate larvae entering potting media.

**For applications to citrus production with other container volumes:**

- Determine the volume of the container and calculate the required dosage needed based on 0.50 mls./0.1 ft.<sup>3</sup> potting media.
- Apply calculated dosage per container as described above.
- Do not exceed 3.0 mls./plant per crop season regardless of container size.

**Phytotoxic Effects Precaution:** Not all varieties or hybrids of citrus have been tested for phytotoxic effects following a Willowood Imidacloprid 2SC application. If you have not used Willowood Imidacloprid 2SC on containerized citrus of a specific variety/hybrid, treat a few plants and observe for phytotoxic effects for up to 60 days before treating the entire nursery.

**Application Restrictions:**

- Pre-Harvest Interval: 0 days
- Maximum Willowood Imidacloprid allowed per application: 0.5 mls./0.1ft<sup>3</sup> container media
- Maximum Willowood Imidacloprid allowed per crop season: 3.0 mls./plant.
- Do not apply pre-bloom or during bloom when bees are foraging.

**CITRUS (Field)**

**Crops of Crop Group 10 including:** calamondin, citrus citron, Citrus hybrids (includes chironja, tangelo, and tangor), Grapefruit, Kumquat, Lemon, Lime, Mandarin (tangerine), Pummelo, Orange (sweet and sour), Tangelo, Satsuma mandarin, and other cultivars and/or hybrids of these.

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|-------------------------------------|
| Aphids, Asian citrus psyllid, Blackfly, Citrus leaf miner, Leaf hopper/Sharpshooters, Mealybugs, Scales, Termites (FL only) and Whiteflies  | 16.0 - 32.0                         |
| <b>Pests/Diseases Suppressed</b>  |                                     |
| Citrus nematode<br>Symptoms of:<br>Citrus tristeza virus (CTV) through vector control<br>Citrus yellows<br>Thrips (foliage feeding thrips only)   | 32.0                                |
| <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>Pre-Harvest Interval (PHI): 0 days</li> <li>Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)</li> </ul> <p><b>Applications:</b><br/>Apply specified dosage in one of the following methods:</p> <ol style="list-style-type: none"> <li>Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. Apply to newly planted trees or those previously trained to drip, trickle or micro-sprinkler irrigation for optimum results. Soil should be lightly prewetted to break soil surface tension prior to applications of Willowood Imidacloprid 2SC. Chemigation application can be made separate to normal irrigation but followed by 10 to 20 minutes of additional watering to move Willowood Imidacloprid 2SC into root-zone. Allow 24 hours before initiating subsequent irrigations.</li> <li>Soil surface band spray on both sides of the tree. Bands should overlap at the tree base to create a continuous band within the drip-line area of the tree, to be followed immediately with light sprinkler irrigation sufficient to move the product into the upper portion of the root-zone. This method is suitable for very coarse soils with 0.75% organic matter or less;</li> <li>Drench to base of tree not exceeding one-quart total solution per tree immediately around trunk of tree and extending outward covering the entire fibrous root system of the tree. Only recommended for trees up to 8 feet tall.</li> <li>For control of existing termite infestations, apply specified dosage in 1 to 4 quarts of total solution volume, depending on size of tree, as a drench application to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk.</li> <li>For suppression of citrus nematode, apply specified dosage through low-pressure chemigation or soil surface band spray only, ensuring complete coverage of the root system and utilizing application directions stated above for the respective application method.</li> </ol> <p>Repeated and regular use of Willowood Imidacloprid 2SC over several consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant</p> |                                     |

response.

**COFFEE<sup>1</sup>**

| <b>Pests Controlled</b>        | <b>Rate (fluid ounces/Acre)</b> |
|--------------------------------|---------------------------------|
| Aphids, Leafhoppers, Leafminer | 16.0-32.0                       |
| <b>Pest Suppressed</b>         |                                 |
| Scales                         | 16.0-32.0                       |

**Restrictions:**

- Pre-Harvest Interval (PHI): 7 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment;
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation
3. Basal, soil drench in sufficient water to ensure incorporation into the root-zone followed by irrigation

<sup>1</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling

**CRANBERRY**

| <b>Pests Controlled</b>  | <b>Rate<br/>(fluid ounces/Acre)</b> |
|--|-------------------------------------|
| Rootgrubs ( <i>Scarabaeidae</i> ),<br>Rootworms ( <i>Chrysomelidae</i> ) | 16.0 - 32.0                         |

**Restrictions:**

- Pre-Harvest Interval (PHI): 30 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

**Application:**

Apply Willowood Imidacloprid 2SC to moist soil. Apply specified dosage in one of the following methods:

1. As a soil spray (ground application) directed to the root and crown area using a minimum of 20 gal. of water per acre.
2. As a chemigation application with 600 to 1,000 gal. water.

Immediately upon application, Willowood Imidacloprid 2SC must be incorporated into root-zone by 0.1 to 0.3 inches water/Acre, either with the chemigation application or through irrigation/rainfall if not applied through chemigation. Inadequate incorporation within 24 hours of application may result in reduced control.

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**Rootgrubs and Rootworms:** Best control may be achieved when application is made post-bloom immediately after bees are removed. Applications should target early larvae.

Willowood Imidacloprid 2SC has not been tested for crop response in tank mixes with other registered fungicides or insecticides. If tank mixing is desired, premix a sample of the Willowood Imidacloprid 2SC and the desired fungicide or insecticide partner at labeled rates and apply to a small area. Evaluate crop response with 48 hours and for at least two weeks prior to utilizing the tank mix on larger acreage. If crop injury results from the premix test, do not apply the tank mix to larger acreage.

## GRAPE

Including: American bunch grape, Muscadine grape, and Vinifera grape

| Pests Controlled   | Rate<br>(fluid ounces/Acre) |
|--|-----------------------------|
| European fruit lecanium, Mealybugs, Leafhoppers/Sharpshooters, <i>Phylloxera* spp.</i> | 16.0 - 32.0                 |
| Pest/Disease Suppressed  |                             |
| Grapeleaf skeletonizer, Nematodes, Pierce's Disease                                    | 24.0 - 32.0                 |

### Restrictions:

- Pre-Harvest Interval (PHI): 30 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)

### Applications:

Apply specified dosage in one of the following methods:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.
2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.
3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.
4. For suppression of nematodes, apply 32 fluid ounces in a single application or two 16 fluid ounce applications on a 30- to 45-day interval. Treatment(s) should be applied only by 1) chemigation into root-zone through above ground low-pressure drip, trickle, micro-sprinkler or equivalent equipment; or 2) French plow technique, followed immediately by sufficient irrigation to move the product into the entire root-zone of the plant. Repeated and regular use of Willowood Imidacloprid 2SC over consecutive growing seasons provides the greatest degree of nematode suppression and yields the greatest plant response.

Make application(s) between bud-break and the pea-berry stage for optimum results.

A total of 32 fluid ounces/Acre is recommended under any of the following conditions:

1. Where vigorous vine growth is expected
2. In warmer growing areas
3. Where mealybug and European fruit lecanium populations are expected to be heavy
4. Where vine populations exceed 600 per acre or

## 5. For suppression of nematodes

\*Repeated and regular use of Willowood Imidacloprid 2SC over several, consecutive growing seasons controls existing *Phylloxera* infestations over time or prevents *Phylloxera* from becoming established.

**HOPS<sup>1</sup>**

| Pests Controlled  | Rate<br>(fluid ounces/Acre) |
|---|-----------------------------|
| Aphids  | 19.2                        |
| <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 60 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 19.2 fluid ounces/Acre (0.30 lbs. AI/Acre)</li> </ul> <p><b>Applications:</b><br/>Apply specified dosage in one of the following methods:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> <li>2. Subsurface side-dress shanked into the root-zone on both sides of the plants followed by irrigation.</li> <li>3. Hill drench in sufficient water to insure incorporation into the root-zone followed by irrigation.</li> </ol> <p><sup>1</sup> Use not permitted in California unless otherwise directed by State specific 24(c) labeling.</p> |                             |

**POME FRUIT**

**Crops of Crop Subgroup 11 including:** apple, crabapple, loquat, mayhaw, pear (including Oriental pear), quince

| Pests Controlled   | Rate<br>(fluid ounces/Acre) |
|--|-----------------------------|
| Aphids (including woolly apple aphid), Leafhoppers   | 16.0 - 24.0                 |
| <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 21 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)</li> <li>• Do not apply pre-bloom or during bloom or when bees are foraging.</li> </ul> <p><b>Applications:</b><br/>Apply specified dosage in the following method:</p> <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> </ol> |                             |

**POMEGRANTE<sup>1</sup>**

| Pests Controlled   | Rate<br>(fluid ounces/Acre) |
|--|-----------------------------|
| Aphids, Leafhoppers/Sharpshooters, Whiteflies  | 16.0-32.0                   |
| <p><b>Restrictions:</b></p> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 0 days</li> </ul> |                             |

- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

<sup>1</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling.

**STONE FRUIT**

**Crops of Crop Group 12 including:** apricot, cherry (including sweet and tart), nectarine, peach, plum (including Chickasaw, Damson and Japanese), Plumcot, prune (fresh and dried)

**In-field, Soil Application**

| <b>Pests Controlled</b>                               | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|-------------------------------------|
| Aphids (including woolly apple aphid),<br>Leafhoppers | 16.0-24.0                           |

**Restrictions:**

- Pre-Harvest Interval (PHI): 21 days
- Maximum Willowood Imidacloprid 2SC allowed per year: 24.0 fluid ounces/Acre (0.38 lbs. AI/Acre)
- Do not apply pre-bloom or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in the following method:

1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

**Preplant, Root Drip Application**

| <b>Pest Controlled</b>              | <b>Rate<br/>(fluid ounces/10 gallons root-dip solution)</b> |
|-------------------------------------|---|
| Black peach aphid (infesting roots) | 2.0   |

Mix Willowood Imidacloprid 2SC at 2.0 fluid ounces per 10 gallons of water. Thoroughly wet bare-root transplant to slightly above the graft union by soaking roots in the Willowood Imidacloprid 2SC solution for up to 5 minutes. Allow solution to dry on roots and transplant trees as soon as possible following treatment.

**TREE NUTS<sup>1</sup>**

**Crops of Crop Group 14 except Almond including:** Beechnut, Brazil nut, Butternut, Cashew, Chestnut, Chinquapin, Filbert, Hickory nut, Macadamia nut, Pecan, Pistachio, Walnut [black and English]

| <b>Pests Controlled</b>  | <b>Rate<br/>(fluid ounces/Acre)</b> |
|--|-------------------------------------|
| Aphids, Leafhoppers/Sharpshooters,<br>Mealybugs, Spittlebugs, Termites, Whiteflies | 16.0-32.0                           |
| <b>Pests/Diseases Suppressed</b>   |                                     |
| Pecan scab (from reduction in honeydew)  | 16.0-32.0                           |

|   |      |
|---|------|
| deposition)   |      |
| Thrips (foliage feeding thrips only)  | 32.0 |
| <b>Restrictions:</b> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 7 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)</li> <li>• Do not apply pre-bloom or during bloom or when bees are foraging.</li> </ul>   |      |
| <b>Applications:</b><br>Apply specified dosage prior to or at onset of pest infestation in one of the following methods: <ol style="list-style-type: none"> <li>1. Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment. Pre-wet soil prior to applications of Willowood Imidacloprid 2SC and allow soil to dry following application and prior to subsequent irrigation</li> <li>2. Emitter or spot application in a minimum of 4 fluid ounces of mixture per emitter site</li> <li>3. Shank or subsurface side-dress, injected to a depth just above or just within the root zone and between the trunk and drip line of the tree canopy. Product should be applied in a minimum of 10 gallons per acre using multiple shanks on both sides of trees, Ensure product placement is below sod or orchard floor debris. Irrigation covering entire treated area should follow within 48 hours to promote uptake by root system.</li> <li>4. For control of termites, apply specified dosage to slightly moist soil as a high volume drench to the basal portion of the tree trunk and surrounding soil in the immediate vicinity of the tree trunk. Utilize sufficient carrier volume to penetrate the soil to a depth of 18 – 24 inches to obtain optimum control. Allow soil to dry following treatment and prior to applying any irrigation.</li> </ol> |      |
| <b>Remarks</b><br>Use the higher rate within the specified rate range when applied by shank or subsurface sidedress, used on larger trees, soils with high clay listed content, for high plant populations, and/or where extended control is desired. Under some conditions, control may not occur for 14 or more days or until two (2) irrigations have been made. Applications made later in the season may result in reduced efficacy.   |      |
| <sup>1</sup> Use not permitted in California unless otherwise directed by State specific 24(c) labeling, except Pecan.  |      |

**TROPICAL FRUIT**

Including: acerola, atemoya<sup>1</sup>, avocado, birida<sup>1</sup>, black sapote, canistel, cherimoya<sup>1</sup>, custard apple<sup>1</sup>, feijoa, jaboticaba, guava, llama<sup>1</sup>, longan, lychee, mamey sapote, mango, papaya, passionfruit, persimmon, pulasan, rambutan, sapodilla, soursop<sup>1</sup>, Spanish lime, star apple, starfruit, sugar apple<sup>1</sup>, wax jambu

| <b>Pests Controlled</b>   | <b>Rate<br/>(fluid ounces/Acre)</b> |
|---|-------------------------------------|
| Aphids, Avocado lacebug, Leafhoppers, Whiteflies  | 24.0-32.0                           |
| <b>Pest suppressed</b>  |                                     |
| Scales, Thrips (foliage feeding thrips only)  | 32.0                                |
| <b>Restrictions:</b> <ul style="list-style-type: none"> <li>• Pre-Harvest Interval (PHI): 6 days</li> <li>• Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs.</li> </ul> |                                     |

AI/Acre)

- Do not apply pre-bloom or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in the following method:

- Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.

<sup>1</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling.

**Other Crops**  
**Applications – Willowood Imidacloprid 2SC**

**Christmas Tree<sup>1</sup>**

| Pests Controlled  | Rate<br>(fluid ounces/Acre) |
|---|-----------------------------|
| White grub complex<br>(damage from grubs of Asiatic garden beetle,<br>European and masked chafer, Japanese beetle<br>and oriental beetle)   | 16.0-32.0                   |
| <b>Restriction:</b>   |                             |
| <ul style="list-style-type: none"> <li>Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. AI/Acre)</li> </ul>   |                             |
| <b>Applications:</b>  |                             |
| Soil incorporation and movement of Willowood Imidacloprid 2SC to the root-zone is required for activity. Willowood Imidacloprid 2SC can be incorporated most readily when applied to moist soil.  |                             |
| Apply specified dosage in one of the following methods:   |                             |
| <ol style="list-style-type: none"> <li>Chemigation into root-zone through low-pressure drip, trickle, micro-sprinkler or equivalent equipment.</li> <li>18-inch band on each side of the row (small trees) to full broadcast application (large trees) followed by rainfall or 0.25 -1 inch of irrigation within 12 hours after application.</li> </ol> |                             |
| Apply Willowood Imidacloprid 2SC during adult flight activity, or up to mid-July, when 1st instar larvae are present for optimum grub control.  |                             |
| <p><sup>1</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling.</p>  |                             |

**POPLAR/COTTONWOOD<sup>1</sup>**Includes: members of the genus *Populus* grown for pulp or timber

| Field: See details below for Cuttings/Whips Applications Information   |                             |
|--|-----------------------------|
| Pests Controlled   | Rate<br>(fluid ounces/Acre) |
| Aphids, Cottonwood leaf beetle   | 16.0-32.0                   |
| <b>Pest Suppressed</b>   |                             |
| <i>Phylloxera popularia</i>  | 16.0-32.0                   |
| <b>Restrictions:</b>   |                             |
| <ul style="list-style-type: none"> <li>Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs.</li> </ul> |                             |

All/Acre)

- Do not apply pre-bloom or during bloom or when bees are foraging.

**Applications:**

Apply specified dosage in one of the following methods:

- Chemigation through low-pressure drip irrigation.
- For narrow-row, cutting orchards/nurseries used for plant propagation, shank into root-zone followed by adequate irrigation to promote uptake. (Adequate irrigation depends on soil moisture level at application. Under dry conditions, 0.25 inches/Acre is recommended).

For Cottonwood leaf beetle, protection against damage will occur when application is made early season, when the beetles first begin feeding. Larger trees may require earlier treatment as a result of slower uptake.

For *Phylloxera*, apply early in the year, from break of dormancy through May.

**Cutting/Whip: See details above for Field Application Information**

| Pest Controlled                       | Cutting/Whip Soaking Solution<br>(fluid ounces Willowood Imidacloprid 2SC<br>needed per 100 gallons) |
|---------------------------------------|--|
| Cottonwood leaf beetle                | 13.3 – 26.6 (unhydrated cuttings/whips)<br>26.6 – 40.1 (partially hydrated cuttings/whips)           |
| <b>Pests suppressed</b>               |  |
| Aphids<br><i>Phylloxera popularia</i> | 13.3 – 26.6 (unhydrated cuttings/whips)<br>26.6 – 40.1 (partially hydrated cuttings/whips)           |

**Restrictions:**

- Maximum Willowood Imidacloprid 2SC allowed per year: 32.0 fluid ounces/Acre (0.50 lbs. All/Acre)

**Applications:**

Moisture content of cuttings/whips prior to application, the solution concentration and the length of soaking interval to affect the amount of product absorbed into plant material. For a constant soaking interval of 24 hours, drier cuttings/whips absorb a higher quantity of solution and require a lower concentration. Conversely, more hydrated cuttings/whips absorb less solution and require a higher concentration. Soaking of cuttings/whips should occur in a covered container in absence of UV light. Not all *Populus* spp. Clones/varieties/hybrids have been tested for crop safety. Without specific knowledge about a particular *Populus* spp. Clone/variety/hybrid, Willowood USA recommends that small numbers of cuttings/whips of each be treated and evaluated prior to commercial use.

**Apply Willowood Imidacloprid 2SC in one of the following cuttings/whips soaking methods:**

- For freshly cut (unhydrated) cuttings/whips, soak plant material in specified solution concentration for 24 hours prior to cold storage. After removal from cold storage, plant as needed.
- For previously hydrated cuttings/whips removed from cold storage, allow plant material to reach room temperature and soak in specified solution concentration for 24 hours prior to planting.

Proper care should be taken in disposal of any residual soaking solution. Solution may be applied to existing trees or other registered crops as long as all product label precautions and restrictions are observed.

<sup>1</sup>Use not permitted in California unless otherwise directed by State specific 24(c) labeling.

### STORAGE AND DISPOSAL

Do not contaminate water, food, or feed by storage or disposal.

**PESTICIDE STORAGE:** Store in a cool, dry place and in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open container in a manner as to prevent spillage. If the container is leaking, invert to prevent leakage. If container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. In spill or leak incidents, keep unauthorized people away.

**PESTICIDE DISPOSAL:** Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

**CONTAINER DISPOSAL: Nonrefillable container (equal to or less than 5 gallons).** Do not refill or reuse container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container  $\frac{1}{4}$  full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

**Nonrefillable container (greater than 5 gallons).** Do not refill or reuse container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container  $\frac{1}{4}$  full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill or by incineration, or, if allowed by State and local authorities, by burning. If burned, stay out of smoke.

### IMPORTANT: READ BEFORE USE

**NOTICE:** Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the unopened product container at once.

By using the product, user or buyer accepts the following Conditions, Disclaimer of Warranties and Limitations of Liability.

**CONDITIONS:** The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or

application, all of which are beyond the control of Willowood USA LLC. To the extent consistent with applicable law, such risks shall be assumed by the user or buyer.

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